# IBM System x3650 M5

*Commanding performance and versatility with leadership reliability and security for enterprise solutions*

## Highlights

- Tackle enterprise workloads with power, efficiency and reliability
- Choose from flexible storage configurations for workload-optimized performance
- Reduce unplanned downtime and minimize costs
- Safeguard enterprise data with built-in System x® Trusted Platform Assurance, plus optional self-encrypting drives and IBM Security Key Lifecycle Manager

With the powerful, versatile new 2U two-socket IBM® System x3650 M5 rack server, you can run even more workloads, 24/7, and gain faster business insights. Integrated with up to two Intel E5-2600 v3 series CPUs and industry-leading two-socket storage capacity, the x3650 M5 fast forwards your business. You can select from an impressive array of storage configurations (up to 26 drive bays) that optimize diverse workloads from Cloud to Big Data.

## Leverage leading security and reliability

The x3650 M5 integrates leadership security and reliability. System x Trusted Platform Assurance, an exclusive set of System x features and practices, establishes a foolproof security foundation for your workloads. You can also deploy self-encrypting drives (SEDs) using the optional IBM Security Key Lifecycle Manager (SKLM). System x servers achieved the highest reliability of any x86 server.[1] Diagnostic tools such as Predictive Failure Analysis and the new NextGen Diagnostic panel facilitate easy serviceability and reduced downtime and costs.

## Innovative energy efficiency and performance

Built on an innovative architecture, the x3650 M5 incorporates energy smart features for cost savings. Dual fan zones and extended operating temperature ranges maintain advanced cooling and efficiency. 80 PLUS® Titanium power supplies can deliver up to 96 percent efficiency. With twice the memory, up to 131 percent greater performance[2], and 50 percent more cores and cache than the previous generation, the x3650 M5 lets your workloads fly. End-to-end 12 Gbps RAID support with up to four RAID adapters adds enhanced performance and data protection.

Select configurations of the x3650 M5 are part of the IBM Express Portfolio™, designed to meet the needs of small and midsized businesses. Easy to manage, Express models vary by country.

| IBM System x3650 M5 at a glance | |
|---|---|
| **Form factor/height** | 2U Rack |
| **Processor** (max)/ **Cache** (max) | Up to two Intel Xeon E5-2600 v3 series processors with up to 18 cores each/Up to 45 MB per processor |
| **Memory** (max) | Up to 1.5 TB of memory with SK Hynix 64 GB* TruDDR4 Memory LRDIMMs; System supports RDIMM/LRDIMM |
| **Disk bays** | Up to 24 front and 2 rear 2.5-inch HDDs/SSDs; or up to 12 3.5-inch and 2 rear 3.5-inch HDDs + 2 rear 2.5-inch HDDs/SSDs; or up to 8 3.5-inch HDDs and 2 rear 3.5-inch or 2.5-inch HDDs/SSDs (model dependent) |
| **RAID support** | 12 Gbps dedicated slot for the first RAID; support for up to four RAID adapters |
| **Power supply** (std/max) | 1/2 redundant 550 W AC, 750 W AC, 900 W AC 80 PLUS® Platinum, or 750 W AC 80 PLUS Titanium |
| **Hot-swap components** | Power supplies, fan modules and HDDs/SSDs |
| **Network Interface** | 4 × 1 GbE (std.) and 1 x IMM; optional 10/40 GbE ML2 or PCIe adapter; Trusted Platform Module built-in |
| **Expansion slots** | 1 – 8 PCIe 3.0 slots (supports up to 2 x 300 W GPUs and up to 1 x ML2) and 1 dedicated RAID slot |
| **USB Ports/ VGA Ports** | Up to 3 front (1 x USB 3.0, 2 x USB 2.0) and 4 back (2 x USB 3.0, 2 x USB 2.0) and 1 internal (USB 3.0) for hypervisor/1 front and 1 back |
| **Maximum internal storage** | Up to 86.4 TB |
| **Energy-efficiency compliance†** | 80 PLUS Platinum, 80 PLUS Titanium; ENERGY STAR® compliance (model dependent) |
| **Systems management** | IBM IMM2.1; one IMM dedicated port and one shared; optional remote presence; Predictive Failure Analysis; LEDs; optional next-gen light path diagnostics panel |
| **Operating systems (OS) supported** | Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware vSphere - (Optional USB Key or SD Media Adapter)‡ |
| **Limited warranty** | 3-year customer replaceable unit and onsite limited warranty, next business day 9x5; upgrades available |

## For more information

To learn more about the IBM System x3650 M5, visit **ibm.com**/systems/x or contact your IBM representative or IBM Business Partner.

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* 64 GB DIMMs available at a later date.

† IBM intends to qualify this product to the ENERGY STAR Computer Server requirements, but that will not be finalized until IBM submits the required information to the EPA and receives confirmation from the EPA that the product is qualified.

‡ Available in the first quarter of 2015.

[1] ITIC 2014 Reliability Survey: IBM Servers Most Reliable for Sixth Straight Year at **ibm.com**/common/ssi/cgi-bin/ssialias?subtype=WH&infotype=SA&appname=STGE_XS_IN_USEN&htmlfid=XSL03126USEN&attachment=XSL03126USEN.PDF

[2] Up to 131 percent performance boost based on internal measurements as of June 2014 for representative Java-based workloads, Intel Xeon E5-2699 v3 (18C, 2.3GHz, 145W) vs Intel Xeon E5-2697 v2 (12C, 2.7GHz, 130W)

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